

REMARKS

The Office Action

In the Office Action mailed January 25, 2007, the Examiner rejected claims 1-20 as being obvious over Merkle, U.S. Patent No. 5,442,344 (hereinafter "Merkle") in light of Connors, U.S. Patent No. 6,338,680 (hereinafter "Connors"). Applicant respectfully disagrees that any combination of the references of record discloses a voltage converter that converts a first voltage signal from a diagnostic tool to a second voltage signal that is coupled to an optical receiver to operate the optical receiver in a high speed mode. Additionally, no motivation has been provided for combining the game data interface of Connors with the optical data probe of Merkle. Therefore, Applicant submits that one of ordinary skill in the art would not be motivated to combine the two references cited by the Examiner.

The Section 103(a) Ground of Rejection

No Motivation to Combine Connors with Merkle

The Merkle patent is directed to a data unit in an appliance and an optical probe that communicates with the data unit to obtain data stored in the appliance through an optical signal. The Merkle patent discloses a portable probe that may be used to obtain data stored in the data unit of an appliance. A personal computer may communicate with the probe, *Merkle*, col. 2, line 61 to col. 3, line 64. The only communication between the probe and a computer disclosed in

Merkle is a setup record. *Merkle*, col. 4, lines 21-28. Thus, Merkle does not disclose a diagnostic tool that is coupled to the probe.

Connors discloses an interface between a game console and a computer for the exchange of game data. The interface includes a RS-232 converter for communication of data with a computer. *Connors*, col. 6, lines 4-9. The computer is described as being coupled to the interface through a cable and connector. *Connors*, col. 6, lines 10-14. Thus, Connors uses the RS-232 converter only for the purpose of providing data signals in a manner that complies with the protocol requirements for a computer.

In the Office Action, the Examiner asserted that one of ordinary skill in the art would combine the RS-232 voltage converter of Connors with the probe of Merkle. Applicant respectfully disagrees. Nothing in Connors suggests that a signal from the RS-232 voltage converter would be coupled to an optical receiver for any purpose. In Merkle, the microprocessor is coupled to the optical receiver through TTL circuitry. Nothing in either Merkle or Connors suggests that any benefit, much less high speed operation, would be obtained by inserted a RS-232 voltage converter between the microprocessor and the optical receiver of Merkle. Without some motivation of this type, the combination is only suggested by Applicant's specification. Such use of Applicant's specification is impermissible.

The Cited Combination of Merkle/Connors Does Not Teach Operation Of An
Optical Receiver In A High Speed Mode

Claim 1 requires that the second voltage signal coupled from the voltage converter to the optical receiver “operate the optical receiver in a high speed mode.” Merkle is the only reference in the cited combination that refers to an optical receiver. The Merkle reference, however, fails to discuss the operation of the optical receiver in a high speed mode. The Connors reference uses a RS-232 voltage converter only for the purpose of complying with a computer communication protocol. Moreover, the Connors reference does not disclose any type of optical receiver so it provides no teaching regarding the high speed operation of an optical receiver. Consequently, neither of the references in the cited combination provides a teaching or a suggestion that an optical receiver may be coupled to a second voltage from a voltage converter to operate the optical receiver in a high speed mode.

Claims 1, 3, and 5-7

Claim 1 requires the second voltage of a voltage converter to be coupled to an optical receiver to operate the optical receiver in a high speed mode. As none of the references of record disclose any technique for operating an optical receiver in a high speed mode, this claim is patentable over all references of record, either alone or in combination. Also, because claims 3 and 5-7 depend from claim 1, they include this limitation. Therefore, claims 3 and 5-7 are also patentable over all references of record.

Claim 2

Claim 2 depends from claim 1 so it includes the limitation discussed above with respect to claim 1, and is, therefore, patentable for the same reasons discussed above with respect to claim 1. Additionally, claim 2 requires the first signal converted by the voltage converter to be from the power supply of a diagnostic tool. Merkle discloses no voltage converter and Connors, which discloses a RS-232 converter, does not teach that the converter receives a signal from the power supply of the game interface. For at least these reasons, claim 2 is patentable over all references of record, either alone or in combination.

Claim 4

Claim 4 depends from claim 1 so it includes the limitation discussed above with respect to claim 1, and is, therefore, patentable for the same reasons discussed above with respect to claim 1. Additionally, claim 4 requires the second voltage signal from the voltage converter be coupled to an amplifier to operate the amplifier in a high speed mode. Merkle discloses no voltage converter and Connors, which discloses a RS-232 converter, does not teach that a voltage signal from the converter be coupled to an amplifier to operate the amplifier in a high speed mode. For at least these reasons, claim 4 is patentable over all references of record, either alone or in combination.

Claims 8, 10, and 12-14

Claim 8 requires the coupling of a second voltage, which is converted from a first voltage, to be coupled to an optical receiver to operate the optical receiver in a high speed mode. As none of the references of record discloses any technique for operating an optical receiver in a high speed mode, this claim is patentable over all references of record, either alone or in combination. Also, because claims 10 and 12-14 depend from claim 8, they include this limitation. Therefore, claims 10 and 12-14 are also patentable over all references of record.

Claim 9

Claim 9 depends from claim 8 so it includes the limitation discussed above with respect to claim 8, and is, therefore, patentable for the same reasons discussed above with respect to claim 8. Additionally, claim 9 requires the first signal converted by the voltage converter to be from the power supply of a diagnostic tool. Merkle discloses no voltage converter and Connors, which discloses a RS-232 converter, does not teach that the converter receives a signal from any power supply. For at least these reasons, claim 9 is patentable over all references of record, either alone or in combination.

Claim 11

Claim 11 depends from claim 8 so it includes the limitation discussed above with respect to claim 8, and is, therefore, patentable for the same reasons discussed above with respect to claim 8. Additionally, claim 11 requires the

second voltage signal to be coupled to an amplifier of the optical receiver to operate the amplifier in a high speed mode. Merkle discloses no amplifier for an optical receiver and Connors does not teach the use of an optical receiver, much less the use of an optical receiver having an amplifier. For at least these reasons, claim 11 is patentable over all references of record, either alone or in combination.

Claims 15 and 19

Claim 15 is directed to a diagnostic system having a diagnostic tool with a communication interface and a communication probe that is coupled to the communication interface of the diagnostic tool through an electrical cable. The communication probe includes a voltage converter that converts a first voltage to a second voltage that is coupled to an optical receiver in the communication probe. The second voltage operates the optical receiver in a high speed mode.

As noted above, none of the references discloses a diagnostic tool that is coupled to a communication probe. The probe of Merkle is independently operated to obtain data from a data unit in an appliance. The probe may be taken to a remote computer for the downloading of a setup record, but the probe is not operated with a computer to obtain data from a data unit. Connors teaches the connecting of an interface with a computer or a game console. Connors, however, lacks any teaching on the use of an optical receiver in any of its components. Thus, none of the references discloses the high speed operation of an optical receiver. Moreover, none of the references teaches the conversion of a

first voltage signal to a second voltage signal so the second voltage signal can be used to operate an optical receiver in a high speed mode. Because claim 19 depends from claim 15, it also includes these limitations. Therefore, claim 19 is patentable for the same reasons as claim 15.

Claim 16

Claim 16 depends from claim 15 so it includes the limitation discussed above with respect to claim 15, and is, therefore, patentable for the same reasons discussed above with respect to claim 15. Additionally, claim 16 requires that the diagnostic tool be a handheld computer. Merkle discloses a probe as shown in FIG. 3, but the computer of Merkle is not disclosed as being a handheld computer operating as a diagnostic tool that is coupled to the probe through an electrical cable. For at least this reason, claim 16 is patentable over all references of record.

Claim 17

Claim 17 depends from claim 15 so it includes the limitation discussed above with respect to claim 15, and is, therefore, patentable for the same reasons discussed above with respect to claim 15. Additionally, claim 17 requires that the diagnostic tool be a personal digital assistant. None of the references discloses a personal digital assistant, much less a personal digital assistant having a communication interface that is coupled to a communication probe

through an electrical cable. For at least this reason, claim 17 is patentable over all references of record.

Claim 18

Claim 18 depends from claim 15 so it includes the limitation discussed above with respect to claim 15, and is, therefore, patentable for the same reasons discussed above with respect to claim 15. Additionally, claim 18 requires the voltage converter be coupled through the electrical cable to the power supply of the diagnostic tool. Merkle discloses no voltage converter and Connors, which discloses a RS-232 converter, does not teach that the converter receives a signal from any power supply. For at least these reasons, claim 18 is patentable over all references of record, either alone or in combination.

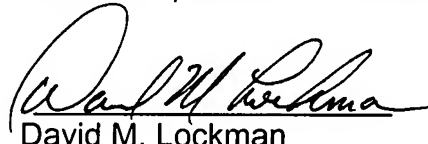
Claim 20

Claim 20 depends from claim 19 so it includes the limitation discussed above with respect to claim 15, and is, therefore, patentable for the same reasons discussed above with respect to claim 15. Additionally, claim 20 requires a -12 volt signal be coupled to an amplifier to operate the amplifier in a high speed mode. Merkle discloses no amplifier coupled to a phototransistor and Connors does not teach the use of a phototransistor, much less the use of an phototransistor coupled to an amplifier. For at least these reasons, claim 20 is patentable over all references of record, either alone or in combination.

Conclusion

For the reasons set forth above, all pending claims 1-20 are patentable over all references of record, either alone or in combination. Reexamination and allowance of all pending claims are earnestly solicited.

Respectfully submitted,
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A handwritten signature in black ink, appearing to read "David M. Lockman", written over a horizontal line.

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